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AUTHOR	Richards, Louise G.
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Abstract

This paper is divided into two parts: (1) the drug abuse education activities being carried out by the various agencies that take responsibility in this area, and (2) an analysis of various kinds of efforts made in drug abuse education today and the resulting product. The definition of drug abuse education used by the author contains the following elements: reasonably accurate information on abused or illegal drugs conveyed via a psychological principle (or force) and designed to change individuals' knowledge, attitudes, or behavior in a direction desired by the educator. The three goals of the federal government's educational activities are: (1) to prevent the use of illegal and potentially harmful drugs, (2) to present enough information so that students can decide for themselves, and (3) to increase understanding of all the factors that account for drug use and related social attitudes and policy. Various methods used in drug education are explained. These include: (1) scare tactics, (2) exhortatory methods and materials, (3) professional or experiential authority, (4) increased status in a current role or a desired new one, (5) the organization and elaboration of concepts in a logical structure, (6) encounters (group techniques), and (7) humor of entertainment techniques. (KJ)

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GOVERNMENT PROGRAMS AND PSYCHOLOGICAL PRINCIPLES IN DRUG ABUSE EDUCATION

Louise G. Richards, Ph.D.
Research Psychologist
U. S. Bureau of Narcotics and Dangerous Drugs

I would like to do two things in this paper. First, speaking for the federal government, I want to review the drug abuse education activities being carried out by the various agencies that take responsibility in this area. Second, as a psychologist I want to present an analysis of the various kinds of efforts made in drug abuse education today and of the resulting products. In connection with this analysis, I also want to propose a strategy based on the concept of operant levels.

Let me review briefly the activities of the federal agencies that have become involved in drug abuse education and the administrative status of their programs.

1. The Bureau of Narcotics and Dangerous Drugs in the Department of Justice, carries on education activities of several types. It has a contract research program that includes evaluations of educational projects. Examples of some projects are the National Association of Personnel Administrators' 1966-67 conferences[1] for college deans and counselors, and the Columbia College of Pharmaceutical Sciences' project,

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"Respect for Drugs."[2] The Bureau also has produced educational materials for public use, including a set of Fact Sheets and a book on LSD.[3] The primary purpose of the education program is to reach groups and individuals who are in positions to influence actual or potential drug abusers, and to provide information and materials for them.

2. The National Institute of Mental Health's Division of Narcotic Addiction and Drug Abuse administers a number of contracts and grants that pertain to drug abuse education. The Institute also has produced educational materials for public use. During the next year, they plan to disseminate a variety of innovative materials (for teachers) produced from a teacher training project. Recently the Institute also produced a series of radio and television spots for nationwide viewing.

3. The Office of Education supports programs and research applicable to drug abuse education, though its authority does not cover drugs or health per se. Some of the project funds are allotted through the states, which approve and administer the programs. The programs can be initiated under a variety of headings, such as: areas with low income families; dropout prevention; improvement of college teaching and learning; college capability in helping communities solve their problems; and purchase of instructional materials.

An example of a project supported by OE and administered by the State of California is going on now in Coronado, a small affluent community in San Diego.[4] It is a three-year project that began with an exhaustive investigation of the current drug situation. The next phase will be a study of the teen culture and the effect of advertising on drug use. The third phase of the project will be the formulation of the curriculum. A unique feature of the project is the close and constant involvement of students as planners, researchers and teachers.

4. The Office of Economic Opportunity last year supported a project in prevention and treatment of narcotic addiction that included an educational component. Specifically, ex-addicts were employed in teacher training and classroom instruction on narcotics. Some of the findings of that study will be reported in a later section of this paper.

Other departments of the Federal Government have conducted special educational programs for their employees or clients. The Department of Defense, for example, has produced posters, leaflets, and films for use with servicemen. Some of the films are also available for public use.

Only the four agencies described above have projects designed for the general public, and only the first two, the Bureau of Narcotics and Dangerous Drugs, and NIMH'S Division of Narcotic Addiction and Drug Abuse,

have programs and funds devoted exclusively to drug abuse education.

This would seem to be a logical place for describing a rationale for drug abuse education, whether it is conducted inside or outside the government. This could be done in a few sentences both from an official government standpoint and from the standpoint of most educational institutions. I believe though that discussion of a rationale means little without specifying what is meant by drug abuse education. What is meant by drug abuse education can be specified by a definition, or by clarifying the goals of activities that persons choose to call education. I would like to do both.

For the purpose of this paper, it is essential to put a boundary around the concept of drug abuse education. It is obvious from a skimming of the articles on the subject that many conflicting things are meant by that phrase. This definition will not capture the essence of the concept as it is understood by everyone. But this is what is meant by drug abuse education in the text that follows:

1. Reasonably accurate information on abused or illegal drugs;

2. Conveyed via a psychological principle (or force); and

3. Designed to change individuals' knowledge, attitudes, or behavior in a direction desired by the educator.

It should be noted in the above definition that the goal of the activity is left up to the educator. This is really the only workable definition that can be made in the present situation. The goals do vary and some clearly are in conflict.

The goal of much of the federal government's educational activity is to prevent the use of illegal drugs and those that are potentially harmful. It is recognized that laws alone have not prevented abuse and cannot be expected to do so in the future. The goal of many other current educational programs is to present enough information so that students or audiences can make rational decisions for themselves. This second goal does not necessarily include a proscription against use. A third type of goal appears to be that of increasing understanding of all the factors that account for drug use and related social attitudes and policy. There is an implication in some of these programs that social attitudes should change and become more neutral or positive for some drugs, especially marihuana.

Discussions about drug abuse education often come down to differences over these goals. One sociologist has suggested, for example, that drug abuse education is often used as an euphemism for persuasion to abstinence, and that such activities do not deserve the label "education".

In another critical essay, a psychiatrist has suggested[6] that drug abuse education is merely a game. In a most witty analysis, he describes the players and the rules of the game. The Players include: the Experts and the Audience; the Bad Guys and the Good Guys. The Rules of the Game include one about reminding the audience of their own abuse of alcohol, aspirin, sleeping pills, and stimulants. The author also analyzes the motives of the players. The motive of some participants, he says, is genuine concern about the fate of drug users. The motive of some others is to fulfill their obligations to role or position. And the motive of still others is to express

their own needs or conflicts, perhaps unconsciously. According to the author, the last motive is the one that leads to the game-like quality of many educational panels and to power struggles, misunderstandings, and hostilities.

Both of these criticisms reflect the fact that we lack consensus on goals. Some, like the second, claim that education should not continue, or even commence, until the goals are clear and agreed upon by all. My personal view on this is that education may serve as an effective arena for deciding on these goals, serving this function along with legislatures, the mass media, and other kinds of forums.

The sociologist Geis has raised another type of question about drug abuse education. He wonders whether there is any basis for believing that it can achieve the goal of prevention, especially prevention of narcotic use.[7]

Geis ferreted out the only studies that existed before 1968 on the effectiveness of narcotics education and found the evidence fragmentary. Only two studies, small ones, carried any support for continued or increased educational effort. One of these was done in 1935 and the other in 1955. The study with which Geis was associated, and several others recently launched, are attempts to plug this hole, but none is in print at this time.

In the case of anti-smoking education, there are some figures on the relative influence of education vs. other forces that do make one pause. In assessing the influence of various forces on smoking among 50,000 teenagers in Indiana, "ignorance of the hazards" was assigned 1.3%

and the peer group, 34%.[8] It is no less true that drug abuse is supported almost entirely by the social environment and minimally by rational considerations. Health education has a formidable opponent in these social forces.

Geis mentions three possible unpredicted consequences of narcotics education that can make it a double-edged phenomenon.[9] One is that fear of drugs may be reduced to the point that behavior opposite to the intended goal will result. This warning has been around for a long time. Presumably this idea was responsible in part for the former Bureau of Narcotics' policy on education.. The British Dangerous Drug Law warns that education might make drug taking exciting and therefore attractive. It is still a caveat to be reckoned with.

Even if drug abuse education had no detrimental affects, says Geis, it may be quite ineffective. Parents may be satisfied and comforted by the idea that their children are learning about the hazards of drug use while the young themselves remain entirely unaffected by the activity. This is a possibility that could be raised for many other cherished educational traditions, of course. It means that care is needed in specifying the indicators used for judging the effectiveness of programs.

Still another possibility mentioned by Geis is that drug abuse education may improve the rapport between teacher and pupils while students' knowledge or attitudes remain unchanged. The subject matter itself, being "mod" and timely, may engage the interest of students, yet result in very little learning. Students respond quickly to topics of popular interest, such as drugs, music, or clothing, but their behavior may consist of

exchanges of practices and tastes with little real improvement in understanding.

Geis' questions reflect the fact that we are still quite ignorant about the effects of drug abuse education, both immediate and long-range. Few would say today, though, that we could return to a state of untutored innocence. Fire has been stolen from the Gods.... and we must learn how to live with it or suffer the consequences. If drug abuse education is also like playing with fire, then we need to specify the conditions under which some procedures might work for us and others against.

As it sometimes described, drug abuse education sounds as if it were all of a piece. Or it is equated with one form alone, such as the familiar panel arrangement of experts from various fields. Now the field has begun to expand and there is a carload of different activities.

There seems to be a need to examine the kinds of activities falling under the definition, for the psychological assumptions or principles that guide them. In looking over the government-sponsored activities and others that I know about outside the government, I see a half-dozen such principles that I believe are the core processes. It may be of benefit to educators and designers of materials to consider how these processes work in other areas of life, to predict how they will succeed in drug abuse education. This kind of analysis makes possible the beginning, albeit a crude one, of a science of drug abuse education.

These then are some of the principles that I have seen:

1. The first is the traditional one we call <u>scare tactics</u>. In a typical piece, whether it is a leaflet, a film, a lecture, or some

other form, the hazards of taking drugs are the main points. Often case histories are used to portray the consequences for real persons or situations. Illness, injury, death, or lost opportunities for the good life are emphasized. The expectation on the part of the educator is that recall of negative reinforcement will lead to avoidance of the drug.

This variety of education has been severely criticized. We have heard the reactions of both teachers and students, and most agree that at a minimum, the method is ineffective. It often brings disrespect and incredibility. Worse, it may boomerang and create a feeling of immunity. The evidence for such effects was seen long ago in Janis and Feshbach's experiment in dental health education.[10] They found that the use of horror pictures of diseased teeth was less effective in changing practices than a more neutral approach, for instilling good dental habits. Apparently, the students in that experiment were true to dissonance theory: When stimuli were inconsistent with their self-image, they dismissed them as incredible.

Another criticism is that credibility is strained by implications in the messages that "Possibility equals Probability." This is the assumption that because a few frightening results <u>have</u> occurred, it is inevitable that they <u>will</u> occur to all who use the drug. Another questionable assumption in some materials is that "Correlation equals Cause." This is the assumption that because one act, such as heroin use, has followed another, such as the use of marihuana, the earlier act is the cause of the later one. These ambiguous assumptions have put fear-based messages into much disrepute among those who consider themslves <u>au courant</u> on the drug abuse education scene.

The criticisms are well-taken. Many officials and educators are aware of them, and the worst examples have been quietly retired from the shelves. In correcting these errors, however, we should not toss the fear approach away for all time. To my surprise, I discovered that the old and respected finding on dental health education has now been overturned. In a newer experiment, it has been found that the fear approach does "take" with some students, though not with all.

In 1964, Haefner found that scare tactics work reasonably well with working-class or lower middle-class students, but not with those
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from better-off, educated families. We can only guess at the reasons for the difference. Perhaps working-class children have seen more cases of real dental devastation than middle-class children have. Perhaps it reflects differences in child-rearing practices. We know, for example, that working class parents tend more often to want obedience from their children than middle-class parents. Perhaps they respond to fear-based tactics used by their parents. The point is that conditions may exist under which the fear approach works in drug abuse education, if they can be specified.

Any use of the fear approach must be based on valid information about hazards. Children could be told without exaggeration about real cases of the effects of glue sniffing. Children in vulnerable areas could learn about the course of heroin addiction. Apparently many see only the beginning stages and seldom know the consequences. To use the fear approach successfully, the material must fit the circumstances that children recognize as

familiar, but not be so repulsive that reality is supressed or denied.

We use the fear approach in many educational areas today, in teaching the hazards of pesticide use, reckless driving, handling guns, and many other "abuses." I believe that it has its place if used ethically and intelligently, with groups who will benefit from it.

2. Another category of methods and materials can be called the exhortatory. Many articles, leaflets, lectures, and films are designed on the principle that the audience wants points or evidence for making decisions on drugs. In older pieces, the presentations were mainly one-sided, and resembled the fear approach. Now, some are designed deliberately as two-sided presentations, based on findings in attitude research that sophisticated audiences are seldom persuaded by one-sided arguments. The early Leary-Lettvin TV debate was of this order.

Many panels are patterned on the two-sided-or-more model with a law enforcement representative, a drug user, a psychologist or educator, a physician, etc. (i.e., "The Game").The N.A.S.P.A. Conferences of 1966-67 were based on this principle, and many have followed. One conducted at Temple University included before and after measures of knowledge

and attitudes as a test of the method. Not too surprisingly, knowledge increased for every type of group. More surprising was the finding that the group's attitudes toward marihuana shifted from being relatively positive toward legalization to a more neutral position, especially among the undergraduates.

My observation is that two-sided presentations are the only

type for college students. One-sided presentations, if they are opposed to drug-taking, are virtually doomed. Perhaps students today are even skeptical of one-sided presentations on the pro side. I do not believe that two-sided arguments are appropriate for young children, however. Regardless of the goal--whether proscriptive or ameliorative--they do not have the judgment necessary to make decisions about drug taking for themselves. Many will interpret a two-sided argument as an invitation to experiment. Whether some junior and senior high students are ready for the two-sided approach is best judged by those who know the groups well.

The style of traditional logical arguments is not always the most interesting for educational purposes, of course. Much of the literature in circulation is hortatory, but it has been dressed up with the language of the audience and appeals to their motives and interests.

Exhortations are undoubtedly effective for those who are searching for new points or arguments. It is well recognized that not all information is equal in impact, but tends to be selected to fit previous positions. However, with large groups of students on the fence today about drugs, these pros and cons may often serve their intended purpose of providing a logical basis for decisions.

3. Third, the use of professional or experiential <u>authority</u> in connection with information transmission is another old method. It is used often in drug abuse education to convince students and audiences of the validity of the message. Since there is much public confusion about drugs today, authorities are in great demand.

The drug question is seen in many ways. For this reason, there are many kinds of authorities asked for their expert opinion -- physicians, legal and enforcement officials, psychologists, and sociologists. Even ex-addicts are used as authorities of a kind. All authorities are not seen as equal in usefulness, however. High school students in a study in the state of Michigan rated nine types of persons for their ability to advise on drugs.[13] Personal physicians and university "doctors" were at the top of the list, drug users were near the median, and policemen, ministers, and school counselors were at the low end. These ratings represented students' confidence in members of groups qua groups, of course. Those who have been on drug abuse panels know that an individual's knowledge on the subject is only weakly predicted by his professional affiliation. There are individual school counselors who are much more knowledgeable than the average physician about the drugs being used by young people. The ratings do seem to indicate, however, that high school students want advice on the health aspects of drugs rather than on the moral or legal implications.

The use of former drug users or addicts in educational programs is new. Last year, two junior high schools in the Boyle Heights section of Los Angeles were used in an experiment in classroom instruction and teacher training by four ex-heroin addicts from the same area.[14] Boyle Heights is a predominantly Mexican-American depressed area with a high incidence of arrests. Two schools in a nearby area were included in the design as control schools. Both experimental and control schools conducted units of narcotics education, and students in both sets of schools scored approximately the same in a pre-test inventory of knowledge and attitudes. The

results of this experiment are illuminating, the informal observations as much as the statistical findings.

First of all, the experimental schools were strikingly higher than the control schools in drug knowledge at the end of the instruction period. This, despite the fact that the unit on narcotics was only slightly expanded in the experimental schools. The students in the experimental schools also differed on a number of attitude items indicating caution about drug use or desirable differentiation of ideas about drugs and drug users. Thus, the statistical findings support the educational success of the project. Students interviewed at a later period mentioned the ex-addicts as the most worthwhile part of the unit. And teachers rated the ex-addicts as one of the better aspects of the special training given them in advance.

The project was not without its troubles, however. One obstacle was created by the discontinuities among the views of teachers, school administrators and ex-addicts, as well as by differences in their status. This resulted in some mutual distrust and lack of communication. Despite this problem, it was observed that most teachers developed a more human view of addicts during the project, which was an important outcome in itself. A potential hazard was noted in the observation that some students may have admired the ex-addicts too much. That is, in their naive view, the children might have seen drug addiction as the means to a desirable end, since the addicts were healthy young adults acting in the prestigeful role of teacher. This hypothesis seems like an important one to check in future studies.

The most successful part of the ex-addicts' contribution, for both teachers and students, was their account of their own addictive histories. The students asked many questions that revealed their awareness of drug use in the community and their concern over personal aspects of it. They were curious about parents' reactions and about the effect of family members' drug use on them as children. Girls asked about drug use in connection with pregnancy and childbirth. It seemed obvious that the students were highly motivated to learn from them. Undoubtedly the ex-addicts lent credibility to the subject that few teachers can provide.

The plans that met with failure in the project were a series of Saturday symposia where students could come to talk about drugs and evening classes for parents. Both were dropped because of poor attendance. The experience with parents also suffered from the inability of the ex-addicts to penetrate beyond some firmly held attitudes of the parents.

The use of authorities for "source credibility" is frequent. The use of ex-addicts in this role is important as a new technique, but needs to be used with caution still. It may be one of the few successful methods for attitude change. It is probably an inferior technique for transmitting factual material <u>per se,</u> unless the ex-users also have talent as subject-matter specialists.

4. A fourth technique depends on the principle that learning will occur when rewarded by <u>increased status</u> in a current role or a desired new one. One example can be seen in the Coronado, California, project, in which students conduct searches for facts on drugs and drug use, then

transmit the information to their peers as student-teachers. This is

assumed to have the same effect that many adults have experienced: The motivation to learn increases with the responsibility of conveying the information to an audience.

The same principle operated in a continuing education project for pharmacists in and around New York, conducted by Columbia University.[16] Pharmacists enrolled in seminars on drug abuse and were trained at the same time to speak on the subject when requested by schools and community organizations. The project has been a success as far as recruitment of pharmacists and requests for speaking are concerned. Other aspects of the project are still undergoing evaluation.

This technique is reminiscent of another socio-psychological mechanism, the two-step flow of information, discovered in connection with the mass media effect by Katz and Lazarfeld.[17] In the present examples, the two-step process has been created artificially, with motivation added. Since it is a kind of structure or organization, effort is needed, at least in the initial stages, to set-up a workable system. The success of the method at the second level, that is, among the peers or audiences, probably depends on a variety of personal and situational variables.

5. A fifth method of conveying drug abuse knowledge to students is quite traditional. It is the organization and elaboration of concepts in a <u>logical structure</u>. The MMM health education sequence on mood-altering substances[18] fits this category, as do many course guides and outlines. The idea is that students will achieve a new cognitive structure about drugs, an expanded, differentiated, and veridical one, that they will be able to draw on in making decisions or learning new concepts. The purpose of transmitting

information in this form is not manifestly persuasive, though most materials are created with the hope that students will draw conclusions in favor of moderation or abstinence.

Bruner's influence is seen in the more recent materials labeled "conceptual." The assumption seems to be that through carefully chosen "exemplars" of drug effects, a student will "attain" a concept that he can put to use in behavior. In this way, a student would be led, rather than pushed, to understand a concept of the abuse potential of drugs by learning a classification of drugs, for example, then lists of effects and therapeutic indications. (A conceptual approach is not limited to pharmacological information, of course.)

A principle quite similar to concept attainment has been incorporated into a curriculum innovation in California, begun initially for use in an anti-smoking education program.[19] Fifth and sixth graders are studying the circulatory and respiratory systems in breadth and depth, each unit including a segment on diseases and care of the system. The expectation is that students will attain the desired conclusions gradually but indelibly, after immersion in a many-faceted subject. Seventh and eighth grade curriculums are being developed for study of the nervous system (and others) affected by drugs of abuse in the same way. The expectation is that deeper understanding of the system and effects of C.N.S. drugs will result in respect for the hazards of unsupervised use. Although these units are developed on a cognitive model, the actual classroom activities are highly varied.

The use of the traditional outline or structural method undoubtedly increases understanding among "good" students who are highly motivated to absorb and retain facts. It appears from a few evaluations now completed that acquisition of factual knowledge is easily accomplished, at least in the short run. I do not believe that we should be overly optimistic about the effectiveness of the conceptual approach in changing attitudes or practices, however. Very little change of this kind has been demonstrated in other kinds of health education courses or public health campaigns unless the information is personalized in certain ways. Most persons have a fairly good idea of how to balance their daily food intake, for example, but according to recent surveys of food consumption, practices are far from ideal. A conceptual system linked to study of the body systems may prove to be more profound in its impact.

6. A sixth method has stimulated the interest and engaged the services of a number of psychologists in recent years. This is a collection of group techniques going on under the label of encounter, attitudinal confrontation, or sensitivity training. Interestingly, this method is being used at both ends of what might be called a drug use chronology -- for prevention and for rehabilitation. The principle rests upon the belief that for many, attitudes toward drugs are closely related to one's feeling of identity, and attitudes toward others and society.

Last year's A.P.A. Convention saw some spirited debate on the merits of these methods vs. individual psychotherapy for therapeutic purposes. According to Adler, response to some of these methods, the ones he calls the "cult of intimacy", is merely a symptom of a widespread re-

gressive character structures. Soskin, on the other hand, recommended some of these techniques as substitutes for functions that neither the school nor the home can no longer perform adequately.

We have seen little comment on the outcome of these methods in educational settings as separate from therapeutic ones. Some would argue that it is difficult to distinguish between the two purposes. It would be enlightening nevertheless to learn the extent and duration of changes in specific attitudes toward drug use as a result of these techniques. I suspect that not all persons' attitudes toward drugs are closely tied to the self-image and that less intense versions of the encounter technique would suffice for many. Since the encounter technique is not without a potential emotional damage if improperly conducted, it needs intelligent leadership and careful planning.

7. Finally, there is one technique that should be mentioned, though it may not qualify strictly as an educational method. It is the addition of humor or <u>entertainment</u> to the drug abuse message. Humor, especially, is fairly new, and will be interesting to watch. The Professional Arts Company has just made a film called "Pot is a Put-on" that provides some comic relief from a steady stream of serious facts and opinion. In it, pot smokers are portrayed in unbelievable and ridiculous poses, one an airline pilot, for example, and another a dentist about to use his drill on a patient. This is the first technique I have seen that appears to deglamorize drug-taking and helps the non-user to feel a bit superior.

Another piece in the entertainment category is "The Underground

Bird,"[22] a play that can be performed by amateur groups, written for use by upper level high school students. It is not humorous, but dramatizes the decision-making processes of a small group of searching young people.

Substantive information on drugs is at a minimum in such materials, but if well written, the psychological force is strong. Because they are novel, they engage interest and affect thinking in unexpected ways.

These, then, are seven approaches I see in current drug abuse education activities, with their psychological underpinnings. I am sure that others would classify them differently and would see different, perhaps additional, psychological functions for some of the activities. I know that in the real world of teaching and learning, some of the approaches are used in combination, and for that reason some of these distinctions may be quite arbitrary.

Although some of the approaches are traditional and some quite new, I would not categorize any of them as more or less sophisticated. I believe that each has its own optimum utility in certain combinations of persons and settings, but that none is a single best solution for drug abuse education.

Most persons working in this area are aware of the extremely great diversity of knowledge levels, opinions and practices with regard to drug abuse and addiction. Unless these characteristics of students or audiences are known to the educator, educational efforts may miss the mark badly. Knowledge of this "operant level" is essential for designing a successful approach.

Unfortunately, it is sometimes true that a group's expectation is not to learn but to be reassured that their old ideas are still OK. I missed the mark myself on a few occasions with parent groups. I had assumed that since they had asked a psychologist to speak to them, they wanted to hear about drug effects and the reasons young people are experimenting, but not so. Those parents were so frightened of the prospect of drug use in their community that they only wanted reassurance that the full force of the law was being applied. The County Attorney was the man for that group, and his treatment of the subject was much more gratifying to them than mine was. Now I am careful to find out what the experience of a community has been and what the audience is prepared to understand, if it is possible to do so. Sometimes the approach has to be more clinical than educational.

Although my main purpose in this paper was to classify the variety of educational activities, I would like to add a few thoughts on how approaches might be chosen for different operant levels. These are quite simplistic, but they may indicate a direction for further development--or disagreement.

In general, I believe that the higher the intellectual development of a target group, the less likely it is that the fear approach, one-sided arguments, or authority will accomplish the purpose. Two-sided presentations, elaboration of concepts, role-playing, or involvement of self seem more appropriate for those whose thinking processes are relatively more independent and integrative.

I also believe that the greater the involvement with drugs by persons in a target group, the less likely it is that any approach will have an effect except involvement of self, or possibly role-playing. This seems likely because of the fact that there is such great selectivity of stimuli when behavior has become well established. When in addition to well-established habit there is also a supportive peer-group, the possibility of changing attitudes or behavior of heavy drug users with traditional methods is practically nil. With experimenters and "tasters," traditional approaches may have some impact.

By the same token, I believe that the newer methods may be <u>less</u> successful with younger, and less educated persons, and those who are inexperienced in drug use. One may need to "dress up" the simpler traditional methods with more color and drama. But the psychological functions they serve are more appropriate for these groups than an overload of stimuli, concepts, or emotions.

Besides the level of intellectual development and the extent of involvement with drugs, age, social role, and social attitudes of students and audiences are important to gauge. Fitting approaches to these characteristics, and being alert to the feedback, can take drug abuse education much farther than it is at this date.

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